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 TI High-strength cement composition
 IN Sakai, Etsuro; Shibayama, Yukio
 PA Denki Kagaku Kogyo K. K., Japan
 SO Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C04B028-02
 ICI C04B028-02, C04B022-06, C04B024-22
 CC 58-3 (Cement, Concrete, and Related Building Materials)
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 61178462	A2	19860811	JP 1985-19292	19850205
PRAI JP 1985-19292		19850205		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 61178462	ICM	C04B028-02
	ICI	C04B028-02, C04B022-06, C04B024-22
	IPCI	C04B0028-02 [ICM,4]; C04B0028-02 [ICI,4]; C04B0022-06 [ICI,4]; C04B0024-22 [ICI,4]

AB In a high-strength cement composition containing cement, ultrafine powder, high-performance water-reducing agent, and water, crushed opal-based siliceous rock, blast-furnace slag, or fly ash is used as the ultrafine powder and this reduces the shrinkage during its hardening. Thus, a test piece manufactured from a raw mix containing cement 80, fly ash (mean particle size 3.04 μ) 20, sand 120, high-performance water-reducing agent 2, and water \geq 1 weight parts had compressive strength 1423 kg/cm² and hardening shrinkage 1.4%.
 ST fly ash mortar hardening shrinkage; blast furnace slag mortar hardening shrinkage; silica powder mortar hardening shrinkage
 IT Ashes (residues)
 (coal fly, mortar from cement and, with low hardening shrinkage)
 IT Mortar
 (from cement with fly ash or siliceous rock or blast-furnace slag, with low hardening shrinkage)
 IT Slags
 (blast-furnace, mortar from cement and, with low hardening shrinkage)
 IT 7631-86-9, Silica, uses and miscellaneous
 RL: USES (Uses)
 (powder, mortar from cement and, with low hardening shrinkage)

- Cement
 - Fly ash (3.04 μ m mean particle size)
 - water reducing agent
 - water